## **SMARTWAY Transport Partnership**

# BE PART OF THE BIG PICTURE FOR CLEANER AIR



Abby Swaine
Massachusetts Clean Cities Coalition
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# Challenge & Achievement

- Launched Feb 2004 with ATA, top carriers & shippers.
- Collab with freight industry on transportation supply chain sustainability.
- Maximize efficiency within each mode & in mode choice, to reduce emissions by saving fuel.
- Now 3,000+ partners, incl 250 shippers
- Saved 50m barrels of oil + \$6.1b





















## **Dynamics**

### **Shippers:**

- Choose efficient carriers
- Optimize mode choice
- Shrink carbon foot print
- Get recognition

### **Carriers:**

- Save fuel & money
- Attain preferred shipper status
- Get recognition



#### EPA:

- Reduce emissions
- Improve energy security
- Bring agencies & industry together



# **Partnership Basics**

- Categories: Carrier (truck, multi-modal, dray, rail), Shipper, Logistics, Affiliate, Community
- Analyze operations and establish baseline scores using FLEET tool
- Sign partner agreement—initial 3-year period
- With assigned PAM, work out any kinks in model, set goals, choose strategies
- Report progress yearly using model; strive for higher scores
- Qualify to use Partner logo
- Compete for ~annual awards



### **What Carriers Do**

- Idle reduction—mobile, stationary (0.8 gal per hr)
- Speed control (0.1 mpg per 1 mph)
- Driver training & incentives (5%)
- Aerodynamics (11%)
- Tire technology (LRR: 3%; ATI:0.6%)
- Lubricants (3%)
- Hybrid power trains (delivery: 30%)
- Freight logistics (7%)
- Weight reduction (5-10% per 10% lbs)
- Longer combination vehicles (13-21%)
- Intermodal and multi-modal (190-550%)
- Alt fuels
   — Biodiesel, CNG, LNG, LPG, etc



it's face it, any time your fleet can boost fuel efficiency by 10 to 20%, it reflects well on you and your bottom line. S. EPA certified Smart/Nay Tractors and Traiters allow you to do just that. You can also display the Smart/Nay withocknow mark, a symbol of environmental disdiraction, which also reflects well on you. The Smart/Nay led indicates both inclustry and the public that you operate the cleanest and most efficient trucks and expirement available today





## EPA also provides...

- Website
- e-Updates
- Webinars
- Verified technology for trucks & locos
- SmartWay Designated Tractors & Trailers
- Financing programs
- International coordination
- With DOE, support use of biodiesel & alternative fuels, & expand TSE network

### WE'RE SHOWING YOU THE MONEY



#### INTRODUCING FLEXIBLE LOANS TO BUY FUEL-SAVING TECHNOLOGY

If you're a small trucking business, we can connect you to loan funds. The way you like, rapid approval, minimal papersure, and on collateral

You can use the money to purchase fuel-awing betonology found in the SmartHay<sup>er</sup> Upgrade Kit. The Upgrade Kit includes lidle reduction devices, low redign resistance times and advanced tracter and traiter aerodynamics. In every case, the fuel savings will pay for the loan and then some. For more info visit www seas synthmetraevilinacing bith.



An insovative program from the

#### CALCULATE YOUR SAVINGS TO THE ENVIRONMENT. TO YOUR BOTTOM LINE.



For logistics managers, SmartWay can add up to 7% in fuel savings.

SmartWay Transport helps shippers and for-hire carriers lower greenhouse gases and other emissions, while at the same time giving the average truck a fuel savings of \$2,000 per year.

To find out more about this new partnership, call for your info kit at 1-734-214-4767 or log onto www.epa.gov/smartway.



A new voluntary program from the U.S. Environmental Protection Agency



# **SmartWay Tractors & Trailers**

- 10-20% FE gain: 2007+ engine, idle control, low rolling resistance tires, & aerodynamics
- Equipment leased or owned by Partners in good standing can use logo
- Tractor makes: Daimler, Navistar, Kenworth, Mack, Peterbilt, Volvo
- Trailer makes: Great Dane, Hyundai, Manac,
  - Stoughton, Strick, UtilityTrailer, Vanguard National, Wabash, Wilson







# What Shippers Do

- Ship more freight with SmartWay Carrier Partners
  - Model imports data for truck, rail, logistics (3PL, 4PL), & multi-modal carriers
  - Shippers can make separate comparisons for:
    - inbound vs. outbound
    - domestic vs. international
  - Make partnership a business factor or MUST
- Intermodal and multi-modal shipping
- Reduce miles
- Reduce weight

SHIP SMARTER



An environmentally appealing way to transport goods that's also deliciously profitable.

SmartWay Transport helps shippers and for-hire carriers lower greenhouse gases and other emissions, while at the same time giving the average truck a fuel savings of \$2,000 per year.

To find out more about this new partnership, call for your info kit at 1-734-214-4767 or log onto www.epa.gov/smartway.





# **New: Better Carrier Comparisons**

- Carrier scores based on actual fuel efficiency, not default credits for technologies & strategies used
- Carrier scores shown for each hire-able division/fleet— TL (dry van & container), LTL, Refrigerated, Tanker, Flatbed, Dray, Specialized (Bulk, Heavy, Auto, Moving), Pkg Delivery, & Mixed.
- 8 scores for each fleet-- for CO2, NOx, PM10 & PM2.5, each shown both as g/mile & g/ton-mile
- Each score is expressed in one of 5 percentile ranges ("bins"), covering that peer group
- New Multi-Modal model, incorporating rail

**SmartWay**<sup>sm</sup>

 Updated Logistics model-- new Truck & Multi-Modal data download directly to it

# **SmartWay & TSE**

- VerifyTSE technology <u>www.epa.gov/smartway/technology/idling.htm</u>
- Idle Reduction fact sheet
   www.epa.gov/smartway/documents/partnership/trucks/partnership/techsheets-truck/EPA420F09-038.pdf
- Truck Stops can be Affiliates
  - Revamping Agreement
  - Emphasis: educate customers
  - Also: idle-free areas?
  - Toolkit: poster, placemat, table stand, video...
- DERA-funded TSE in New England
  - Maine TPA West Gardiner (30 AireDock)
     – see video www.maineturnpike.com/traveler\_services/electrification.php
- New Haven (14 CabAire)
   SmartWay<sup>sM</sup>



SmartWay Truck Stops are locations where you can rest and not idle your truck's engine. You can rest without the noise and pollution from idling trucks, and they give you the chance to save money. Find helpful information about buying energy-saving devices, like auxiliary power units, low-rolling resistence tires, tractor-trailer aerodynamics, and automatic tire inflation systems, as well as lower cost loans with flexible terms.

For more information, see our brochures on display or visit us at

# SmartWay Truck Stop

#### SmartWay\* Transport Partnership U.S. EMPHOPMENTON PROTECTION AGENCY WWW.epa.gov/smartway (734) 214-4767

#### **Opportunity**

### Idle-Free Quiet Zone

- SAVE fuel
- SAVE money
- SAVE wear and tear on your engine
- STOP pollution
- STAY healthy

Truck stops across the country are participating in this new SmartWay Transport Partnership. SmartWay Truck Stops participate by creating "idle-free" zones where trucks can park without idling their engines. This is a joint venture between the U.S. Environmental Protection Agency and the truck stop industry with the goal of helping truck drivers save money, reduce emissions, and rest comfortably.

# Reality Check

Long-duration truck engine idling has a significant impact on our environment and economy. The total fuel use by idling trucks is estimated to be over 2 billion gallons per year. This amounts to almost 7% of all fuel used by trucks, and equals over 47 million barrels of oil imported from foreign countries (based on 2006 data).

#### **Match This!**

Think you know your lingo?
Match the lettered words and phrases in the box with the numbered definitions and descriptions below:

- 1. 5,280 feet
- 2. Small, diesel-powered engines (5 to 10 horsepower) that are installed on the truck to provide energy for heat, air conditioning, and running appliances
- 3. This device disconnects the engine from the transmission
- 4. Tractor and trailer combination
- Loans with low-interest rates and flexible terms (monthly payments as low as \$190 for a \$8,500 APU)
- Vertical exhaust pipe
- Fuel that includes products made from vegetable oil or restaurant grease
- 8. This happens when you lock up a wheel
- 9. Density of vehicles on the road
- Great places for truckers to get some rest

- a) rig
- b) stack
- c) average time allowed for idling in many state/local idling laws
- d) auxiliary power unit (APU)
- e ) air brakes
- f ) advanced truck stop electrification (ATSE)
- g) mile
- h ) traffic
- i ) skid
- j ) SmartWay Truck Stop
- k) clutch
- I ) Loans in SmartWay Transport Partnership
- m) SmartWay Transport Partnership
- n ) biodiesel
- o ) down shift

#### 11. Gear down

- 12. 5 minutes
- An innovative collaboration between U.S. EPA and the freight industry designed to increase energy efficiency while reducing greenhouse gases
- Use these to bring heavy vehicles to a stop
- System that provides electricity, HVAC, and other amenities in-cab

#### Quick Facts: State/Local Idling Laws

Almost half the country has some kind of state or local anti-idling law, many with fines over \$500. You can avoid the risk of fines by buying an idle-reduction technology. EPA provides information on many different types of idle reduction technologies such as APUs, generator sets, fuel operated heaters, and battery HVAC systems. Find the one that best fits your needs by going to:

www.epa.gov/smartway/idlingtechnologies.htm



#### ...did you know?

Need help buying an idle-reduction device? EPA and the Small Business Administration has developed a loan program for the purchase of idle reduction devices, low rolling resistance tires, tractor and trailer aerodynamics, and automatic tire inflation systems. The loans offer flexible terms, low monthly payments, no collateral required, quick and easy application, and a rapid response. Find out about the participating lenders by going to:

www.epa.gov/smartway/financing.htm

United States Environmental Protection Agency EPA420-H-07-001





#### What are SmartWay Truck Stops

SmartWay Truck Stops offer an opportunity for truck drivers to save money, reduce emissions, and rest comfortably. SmartWay Truck Stops also provide important information to drivers about the following:

- Idle Reduction Technologies
- Low Rolling Resistance Tires
- Tractor/Trailer Aerodynamics
- Automatic Tire Inflation Systems
- Alternative Fuels
- Lower Cost Loans

#### Go Aero!

The faster you drive, the more power it takes to push the air out of the way. You can help move that air by installing aerodynamic panels to smooth the airflow around your vehicle. A typical tractor-trailer travelling at about 70 miles per hour with no aerodynamic package needs 170 horsepower just to overcome the aerodynamic resistance, and this does not include the effect of vehicle weight, engine/driveline losses or tire rolling resistance.

Smart Way

If aerodynamic drag is reduced by 10%, fuel consumption will be reduced by 5%.

Here are some statistics from the Technology & Maintenance Council of American Trucking Associations:

- A standard roof deflector can reduce fuel consumption by up to 6%
- A full roof fairing can improve your fuel consumption by up to 15%
- An air dam on the front bumper can cut fuel consumption further by 3%
- Trailer side skirts can save an additional 3%
- Reducing the gap between the tractor and trailer can also save fuel:
  - ~ a reduction from 65 to 25 inches can save from 2% to 5%
  - ~ alternatively, 15-inch cab extenders can save up to 2%







#### **Idling Trucks Waste Fuel**

An average truck, at idle, consumes approximately 1 gallon of diesel fuel per hour. If the air conditioning is on, the truck can consume over 1 gallon per hour.

#### **Idle Reduction Regulations Are Increasing**

Thirteen states have state-wide idle reduction laws, and over 100 counties have their own idle reduction laws. To avoid getting a fine, you need to know which states and counties have idle reduction laws, and you need to know the specifics of each law. The following Web sites list the various laws:

http://atri-online.org/research/idling/truck\_idling\_regulations.htm http://www.epa.gov/smartway/idle-state.htm

#### Stay Healthy, Reduce Idling

While a truck idles, air pollutants may enter inside the truck cab. A recent University of Tennessee study, funded by U.S. EPA, found that in-cab concentrations of particulate matter (PM\_\_) exceeded U.S. EPA's annual health standard in all trucks tested.

Health effects from these tiny particles include asthma, difficult or painful breathing, and chronic bronchitis—especially in children and the elderly. PM<sub>24</sub> can travel long distances on air currents, contributing to the formation of haze.

#### **How Can I Reduce My Fuel Costs?**

To save money on fuel, you can purchase a mobile idle reduction technology. To learn more about these products, such as their cost, weight and size, and energy output, see U.S. EPA's list of idle reduction technologies:

http://www.epa.gov/otaq/smartway/idlingtechnologies.htm

Need help buying an idle Reduction Technology? U.S. EPA and the Small Business Administration have teamed up to offer small trucking companies and owner-operators help in purchasing these technologies. These loans do not require any collateral, and they have a rapid approval process. For a typical APU at \$8,500, the loan will cost about \$1.90 per month, but your fuel savings will be \$330 per month, resulting in a net savings of \$1.40 per month the very first month you have the device on your truck! Plus, you will avoid the risk of any state or local anti-idling laws. Best of all, you get to rest comfortably without wasting fuel and money. To find out how you can obtain one of these loans, visit <a href="http://www.epa.gov/smartway">http://www.epa.gov/smartway</a>





### **DOT & TSE**

I-95 Corridor Coalition Truck Parking Initiative

http://i95coalition.net/i95/Committees/IntermodalFreightPassenger/CVOS ubcommittee/tabid/75/yhtab/515\_1/Default.aspx

- Eventually include TSE finder?
- FHWA Climate Change

www.fhwa.dot.gov/hep/climate/ (Office)

<u>www.climate.dot.gov/ghg-reduction-strategies/fuels-technologies/other-technology.html</u> (Clearinghouse)

- FHWA Sustainable/Green Corridors initiative stems from:
  - www.cec.org/Page.asp?PageID=749&SiteNodeID=539
- Transportation Climate Initiative

<u>www.georgetownclimate.org/state-action/transportation-and-climate-initiative</u>



### **TSE Use Factors/Hurdles**

- Cost & health benefits not understood
- Inadequate network (# locations, # spaces)
- Fleet managers not urging/requiring use
- Shippers not asking carriers to use it
- TSE equipment does not take fuel cards
- Onerous paperwork to get reimbursed
- Confusing or time-consuming to operate
- Trucks not equipped to connect
- Convenient vs. separate location for spaces
- Idlers occupying TSE spaces
- Truck stops want to sell more fuel so idling is good
- Lack of state idle limit enforcement



### A Few More Web Resources

DOE TSE finder

www.afdc.energy.gov/afdc/vehicles/idle\_reduction\_stations.html

 US Freight Sustainability Summit www.epa.gov/smartway/partner-resources/summit.htm

- Technology & strategy fact sheets
   www.epa.gov/smartway/publications/index.htm#technologies
- Verified technologies

www.epa.gov/smartway/technology/index.htm







#### **PLEASE CONTACT:**

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